

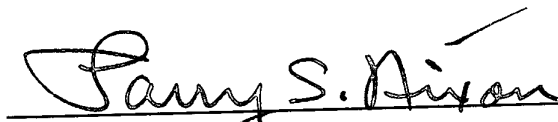
**REMARKS**

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

Respectfully submitted,

**NIXON & VANDERHYTE P.C.**

By:



Larry S. Nixon  
Reg. No. 25,640

LSN:ecb  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION**

Page 1, before the first line, please insert as a separate paragraph:

This application is the US national phase of international application  
PCT/GB00/03811 filed 5 October 2000, which designated the US.

**IN THE CLAIMS**

5. A normalisation apparatus according to claim 1 ~~or 2~~, wherein the predetermined distribution is provided by a dedicated electrical circuit.

6. A normalisation apparatus according to ~~any of claims 1 to 5~~, wherein the first signal is delayed in order that the normalisation may be synchronised with the second signal.

12. A normalisation apparatus according to claim 10 ~~or 11~~, wherein an output from the comparator means is directed to a plurality of counters, each counter being arranged to increment in response to the emitted or scattered signal detected at a predetermined delay following an excitation pulse.

13. A normalisation apparatus according to ~~any preceding claim~~ 1, wherein the discrimination level of the comparator means is an upper level, such that that proportion

of the distributed signal which lies above the discrimination level is discarded by the comparator means.

14. A normalisation apparatus according to ~~any of claims 1 to 12~~, wherein the discrimination level of the comparator means is a lower level, such that that proportion of the distributed signal which lies below the value of the discrimination level is discarded.

16. A normalisation apparatus according to ~~any preceding claim 1~~, wherein the adjustment of the discrimination level is achieved by adding or subtracting values from the distributed signal such that the predetermined energy distribution is shifted in relation to the discrimination level.

17. A normalisation apparatus according to ~~any preceding claim 1~~, wherein a variable delay is introduced into the adjustment of the discrimination level of the comparator means, to provide a phase difference measurement.

18. A normalisation apparatus according to ~~any of claims 1 to 16~~, wherein the apparatus is provided with a series of comparator means, the comparator means being provided with different delays, thereby providing a phase difference measurement.

20. A normalisation apparatus according to claim 18 ~~or 19~~, wherein the time resolution of at least one comparator means is adjustable, thereby providing an adjustable channel width for the phase difference measurement.

22. A normalisation apparatus according to claim 19, ~~20 or 21~~, wherein at least one of the adjustments is automated to locate specific features of the phase difference measurement.

23. A normalisation according to ~~any of claims 17 to 22~~, wherein a variable delay is applied to the first signal, thereby providing a further phase difference measurement.

Please delete claims 27 and 28

~~27. A normalisation apparatus substantially as hereinbefore describe with reference to the accompanying figures.~~

~~28. A method of normalising ssubstantially as hereinbefore describe with reference to the accompanying figures.~~